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## ABSRACT OF THE DISCLOSURE

This invention relates to a Fourier transformation device, in which when storing successively supplied data temporarily by deleting old data while obtaining the newest N data, a difference between a data value supplied just before and a data value to be deleted is supplied by a data updating portion, this supplied data value and a result of FFT operation just before, stored temporarily in a memory portion are supplied to a recursive DFT operating portion and these values are computed according to a predetermined method so as to output a result of the FFT operation with respect to the newest N data values.